



## LL-10 SERIES – POWER LOOP

### SPECIFICATIONS

- ◆ **A direct replacement for mechanical float type liquid level devices**
- ◆ **Proven ultrasonic technology**
- ◆ **Solid state integral electronics**
- ◆ **Designed for years of maintenance-free service**

The Solid State Float™ LL-10 series liquid level switch is a direct replacement for mechanical float type liquid level devices. It employs proven ultrasonic technology and solid state integral electronics. The Solid State Float™ provides reliable operation in virtually any liquid and eliminates failures due to finite mechanical life inherent in the mechanical float design. With fully epoxy sealed electronics, combined with ultrasonic sensing technology, Solid State Float™ is designed for years of maintenance-free service.

### FEATURES

#### Standard Features

- ◆ High pressure up to 1000 PSIG (6895 Kpa)
- ◆ Output: Wet  $16\pm 1$ ; Dry  $4\pm 1$
- ◆ No moving parts, easy to install
- ◆ Input 5 to 30 VDC
- ◆ Digital filter techniques enhance performance

#### Optional Features

- ◆ Electropolishing
- ◆ Higher temperature up to 212 °F (100 °C)
- ◆ Relay output, 0.5 amp SPDT

### APPLICATIONS

- ◆ Pump protection
- ◆ Storage tanks
- ◆ Compressors
- ◆ Medical and laboratory equipment
- ◆ Hydraulic supply lines
- ◆ Oil film detection
- ◆ Coolant reservoirs
- ◆ Boiler water cutoff
- ◆ Sewage systems
- ◆ Pipe lines
- ◆ Hydraulic and lube reservoirs
- ◆ Chillers

**PERFORMANCE SPECIFICATIONS**

Parameter	Typical Value
Repeatability	2 mm or better
Delay	0.5 seconds
Input Voltage	5 to 30 VDC
Input Power	100 mA max standard
Leakage Current	Less than 50 $\mu$ A
Output (standard)	Power Loop Output: Wet $20 \pm 1$ ; Dry $4 \pm 1$ mA
Mounting	3/4" NPT

Parameter	Typical Value
Protection	Transient, reverse polarity
Sensor Material	316L Stainless Steel
Temperature	-20 to +176° F (-29 to 80 °C)
Operating Pressure	Up to 1000 PSIG (6895 Kpa)
Cable Length	1, 4, 10, or 20 foot long cables available

**MECHANICAL DIMENSIONS IN INCHES [MM]**

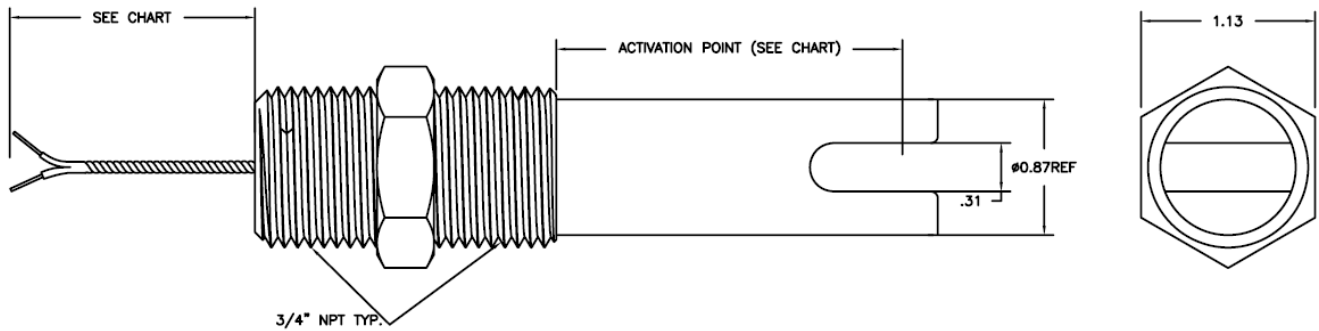


Figure 1: LL-10 series element

**SCHEMATICS**

**Typical Wiring Diagram – Relay Output**

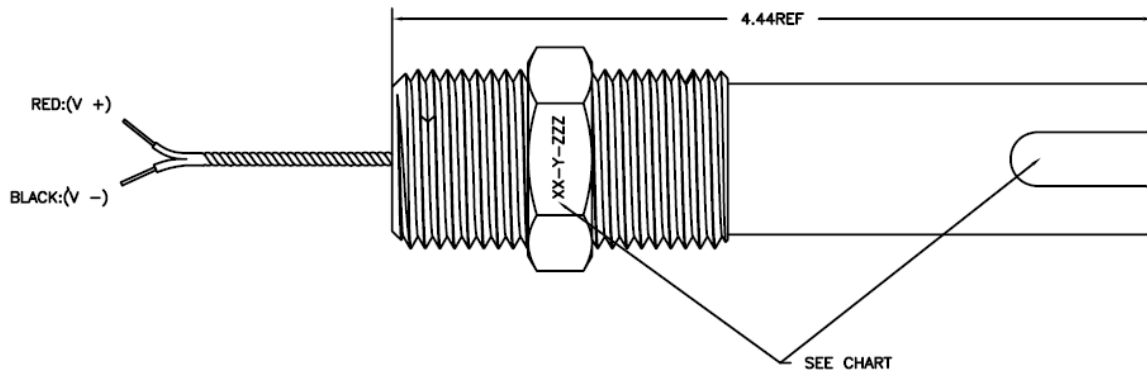
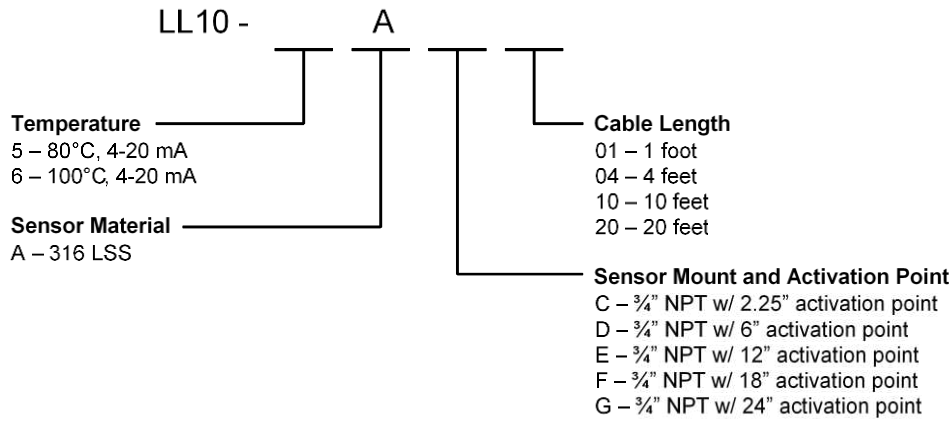


Figure 2: Typical wiring diagram for LL-10 series element

ORDERING INFORMATION

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